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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,328	02/26/2002	Nigel Copner	10-432 US JDS-3021249	3446
26381	7590	08/24/2004	EXAMINER	
LACASSE & ASSOCIATES, LLC 1725 DUKE STREET SUITE 650 ALEXANDRIA, VA 22314			CONNOLLY, PATRICK J	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/082,328	COPNER ET AL.	
	Examiner	Art Unit	
	Patrick J Connolly	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 18-21 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-17 is/are allowed.
- 6) ☒ Claim(s) 1 and 12 is/are rejected.
- 7) ☒ Claim(s) 2-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of claims 1-17 in the reply filed on June 15, 2004 is acknowledged.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

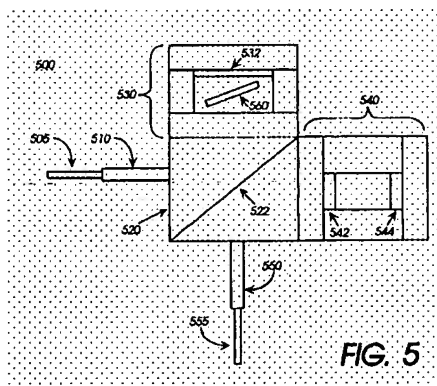
A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 12 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by U.S.

Patent No. 6,275,322 to Tai.

As to claim 1, Tai discloses an interferometer including (see Figure 5, below):



a port for launching an input beam of light (510);

a beamsplitter (502);

a tuning plate (560);

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a first reflective surface (532);
fixed plate means (542);
a second reflective surface (544);
a port for outputting a first output beam (550);
a port for outputting the second output beam (510).

As to claim 12, Tai discloses the second reflective surface being the front reflective surface of a resonator (540).

Allowable Subject Matter

Claims 13-17 are allowed.

Claims 2-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

As to claim 13, the prior art of record, taken alone or in combination, fails to disclose or render obvious an interferometer including: spacer means defining a gap between a first transparent block and a first reflective surface; a tuning plate means positioned in a first optical path; a fixed plate means positioned in a second optical path; wherein the tuning plate means is oriented so that the fixed plate means and the tuning plate means compensate for the optical path mismatch; and wherein thermal expansion of the spacer means compensates for thermal expansion of the tuning plate means, which along with thermal expansion of the fixed plate means ensure that a desired optical path length difference between the first and second optical

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path lengths does not change over a practical range of temperatures, in combination with the rest of the limitations of claim 13.

As to claim 2, the prior art of record, taken alone or in combination, fails to disclose or render obvious an interferometer including: wherein first and second sub-beams pass through an unequal amount of solid material in the beamsplitter creating an optical path mismatch; and wherein the tuning plate means and the fixed plate means are oriented to compensate for the optical path mismatch, in combination with the rest of the limitations of claim 2.

As to claim 4, the prior art of record, taken alone or in combination, fails to disclose or render obvious an interferometer including: wherein the first reflective surface is separated from the beamsplitter by spacer means that thermally expand by substantially the same amount as the tuning plate means, whereby including expansion of the fixed plate means, the optical path length difference does not substantially change over a practical range of temperatures; and wherein spacer means defines a gap within which the tuning plate means is positioned, in combination with the rest of the limitations of claim 4.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J Connolly whose telephone number is 571.272.2412. The examiner can normally be reached on 9:00 am - 7:00 pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J Toatley, Jr. can be reached on 571.272.2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

pjc PTL
08.19.2004



Samuel A. Turner
Primary Examiner